2015 Facilities Plan

For

Butte-Glenn Community College District

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Prepared by Facilities Planning and Management - 2015

Table of Contents

Message from the President

This Facilities Plan provides direction for the future development of the District's campuses. The external forces in which the college operates are ever-changing, and it is important to remain agile. Thus, nothing in here should be taken as cast in stone. This plan will be updated annually to reflect changing conditions.

The students and staff of Butte College are on the brink of potentially huge changes in the way education is delivered. What the future holds with respect to technology is yet unclear. However, there is a belief that, regardless of the advances of technology, a physical place for students and educators to come together will continue to be important.

With the importance of place in mind, Butte College is committed to providing an attractive, safe environment for learning to occur. This plan seeks to promote those concepts while maintaining the highest level of stewardship of District resources.

Kimberly Perry

Introduction

The 2015 Facilities Plan for Butte-Glenn Community College District has been developed to provide guidance for future development activities.

This plan is driven by and supports the District's Educational Master Plan.

It provides an overview of the strategy to address program needs, support enrollment projections, and position the District to maximize funding opportunities.

Educational Master Plan

The Educational Master Plan is the guiding document for all of the District's activities. A flow chart of the Butte College Multi-year Integrated Planning System is available on the District's web site at:

http://www.butte.edu/community/about/pba/documents/Planning%20Process%20MIPS.pdf

The Educational Master Plan may be found at:

http://www.butte.edu/community/about/pba/documents/EducationalMasterPlan.pdf

The Facilities Plan is designed to support and implement the Educational Master Plan.

The Educational Master Plan mentions some facilities-related items specifically and provides direction for others.

Specifically mentioned are:

- Renovating the Technology Building
- Constructing additional space for the Physical Science and Life Science programs
- Constructing a new Welding facility

General direction is indicated for:

- Renovating athletic facilities based on a needs assessment
- Providing permanent space for programs currently located in portable facilities
- Completing land use projects to maintain compliance with regulatory requirements and to meet program needs such as those in agriculture
- Developing a concept for the use of the remaining space in the Skyway Center

Facilities Planning Process

The Facilities Planning Steering Committee is an ongoing part of the participatory governance practices of Butte College.

From the participatory governance handbook:

Purpose: Oversees the development of long-range facilities plans and the execution of facilities construction and maintenance projects on the main campus and at selected off campus sites. Works in coordination with the Educational Master Plan, Technology Master Plan, Finance Master Plan and Human Resources Master Plan. (Reports to the Vice President of Administration)

How Membership is Determined: Faculty members are appointed by the Academic Senate in consultation with the Vice

President of Administration. Administrative representation is appointed by the V.P. for Administration in consultation with the Director of Facilities Planning and Management and the other V.P.s. Classifi ed members are appointed by the Classifi ed Senate in consultation with the V.P. for Administration in consultation with the other V.P.s. Student representatives are appointed by the Butte College Associated Students in consultation with the Director of Facilities Planning and Management.
***Student representation required or strongly suggested*

The Educational Master Plan was essentially complete in the fall of 2013, thus allowing the Facilities Planning to kick into high gear in the spring of 2014.

This plan was compiled as a result of several meetings of the steering committee, along with input from the various constituencies of the District before being finalized.

Because the needs and resources of the District are always changing, this planning process is ongoing.

Guiding Principles

When looking forward and planning for capital improvements, it is critical to have a strong sense of direction, which is supplied by the Educational Master Plan, plus a foundation of principles that will provide guidance for any major projects. The following are the planning principles embraced by the District for any future improvements:

Support and Reinforce the District's Educational Master Plan and Strategic Initiatives
Plan and manage spaces and places to promote Butte's mission and values and assist in meeting the District's strategic initiatives.

Teaching and Learning Spaces
Design and construct spaces that enhance the teaching and learning process.

Treat Space as a Valuable Asset
Plan only the amount of space needed and manage space to maximize its effectiveness in supporting the mission, values, and strategic initiatives of the college.

Respond to Accessibility Needs
Provide access to persons with disabilities, with a goal of universal accessibility.

Facilities and Grounds Stewardship
Preserve the quality and utility of the existing facilities for sustainable use in the future.

Safety of All Users
Provide safe access to and through the campuses for the District's students, faculty, staff and guests.

Planning and Design Integrity
Establish and implement standards for buildings, classrooms, laboratories, support spaces, and grounds that support the instructional mission of the college, promote collaboration, minimize total cost of ownership, and provide an attractive environment for students, faculty, and staff.

Sustainability
Embrace suitable strategies in promoting sustainable sites, water and energy efficiency, renewable energy production, both indoor and atmospheric air quality, and waste and recycling management.

Respect Natural and Architectural Heritage
Design facilities and grounds to respect the natural ecology and to respect the scale, materials, and textures of the existing architecture.

Pedestrian Dominance
Maintain pedestrian-dominant spaces while recognizing and accommodating the need for bicycles and vehicles.

Strong Sense of Place
Create meaningful campus environments and memorable places for all members of the community.

Diversity with Unity
Create and maintain campus settings that bring together the diversity of peoples, heritages, and cultures.

Promote Recruitment and Retention
Emphasize the qualities of the learning and working environments that help attract and retain students, faculty and staff.

Allow for Prudent Expansion of Campus Functions
Provide for facilities expansion in ways that respect neighbors and effectively utilize land resources while conserving and protecting natural resources.

Transportation and Vehicle Circulation
Maintain a safe, functional, and aesthetically compatible system of transportation, vehicle circulation, and parking.

Existing Conditions

The Butte-Glenn Community College District is organized into three campuses.

The main campus is located approximately equidistant from the population centers of Chico, Oroville and Paradise, California, at the intersection of Durham-Pentz and Clark roads. This campus has 928 acres of land and 85 structures containing approximately 678,853 square feet.

The Chico campus has two buildings containing approximately 106,853 square feet situated on 13.5 acres and includes the Chico and Skyway Centers.

Additionally, the District leases 13,200 square feet of space in Orland to house the Glenn County Center.

Orland Campus

Main Campus

Chico Campus

History/Development of Campuses

Main Campus

Butte College was established in 1966 in Durham. In the fall of 1974 the college opened its doors on the current main campus. Most of the original buildings date from that time.

In addition to those original buildings, several portable buildings have been used to house various programs over the intervening years.

Using state funds, the Allied Health Public Service building was constructed, with occupancy in the fall of 2002.

On March 5, 2002, Measure A was approved by the voters of Butte and Glenn counties, authorizing $84.9M of general obligation bonds. This bond approval allowed for many health, safety, maintenance, and efficiency upgrades as well as construction of the Learning Resource Center, the Arts building, the Student and Administrative Services building, and the Chico Center.

All of this construction increased the built environment of the District from 450,996 square feet in 2000 to 785,706 square feet today. This is a 74% increase in building area.

Some of the funds from Measure A ($3.75M) were combined with various rebates, incentives, District funds, and financing to allow the installation of 4.55 MWdc of solar photo-voltaic electricity production capacity. The District was recently honored by the U.S. Environmental Protection Agency for producing 90% of its annual electricity use with this renewable resource.

Chico

The Chico Center was completed in 2004 with Measure A general obligation bond funds. The construction of this facility provides a strong identity for the District in Chico.

Chico Center

The Skyway Center, formerly the Austin's furniture store, located at the corner of Skyway and Notre Dame in Chico, was purchased and renovated for use by the District's programs, with initial occupancy in the fall of 2012. It currently houses the following programs:

- Automotive Technology
- Contract Education
- Foster/Kinship Care Education
- Health Workforce Initiative
- Small Business Development
- Training Place

Glenn Center

The Glenn Center was established in June 2000 to better serve the students of Glenn County. It is located in leased space at 604 Walker St. in Orland. In 2013 an additional floor was added to the lease, doubling the space in the Glenn Center for a total of 13,200 square feet.

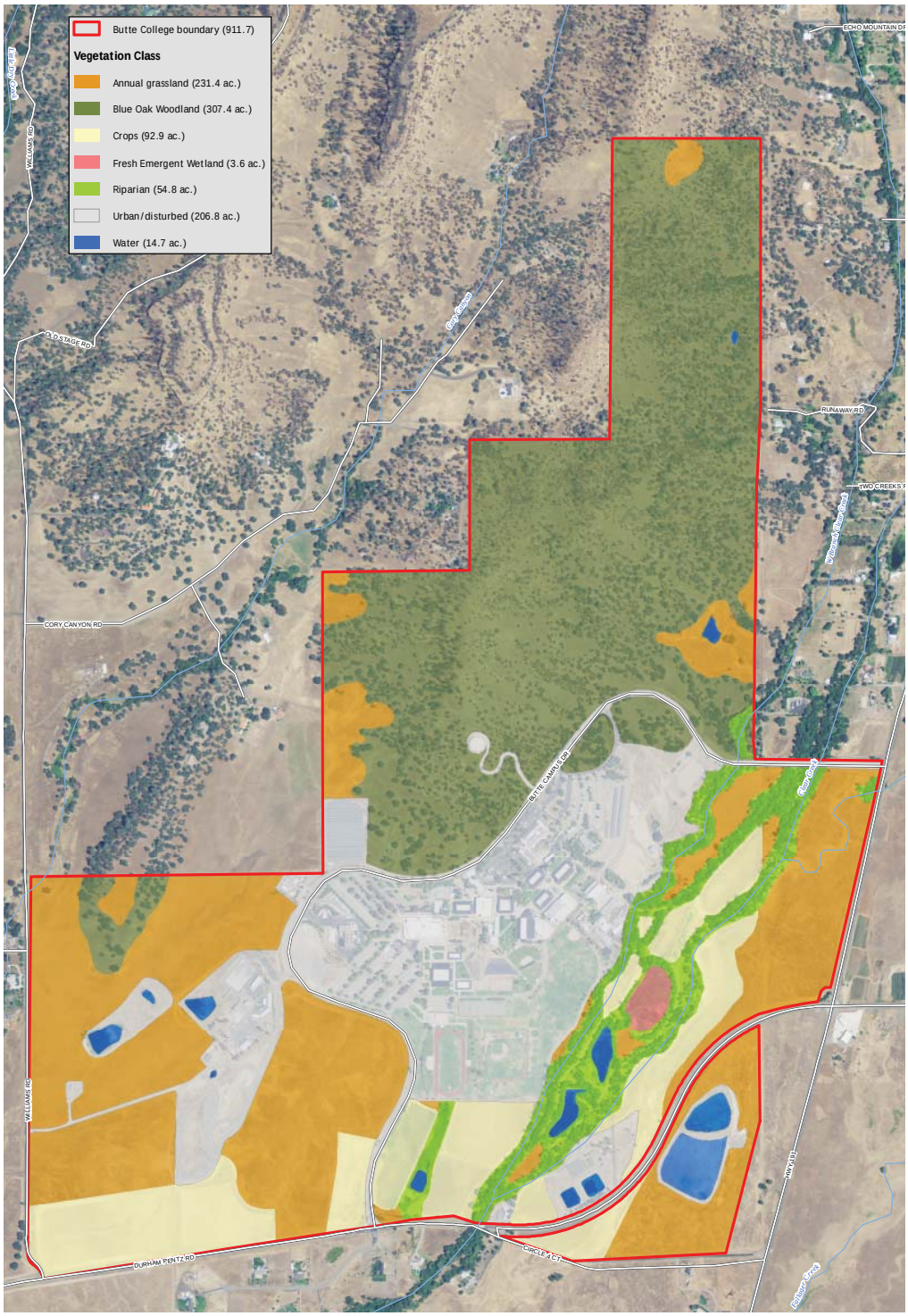
Land Use

The main campus is on 928 deeded acres (911 measured acres), the Chico Center is on 11 acres and the Skyway Center is on 2.5 acres.

Of the 911 acres at the main campus, 206.8 acres are considered developed, and are building sites, pavement or maintained landscape. The adjacent map shows the following other areas:
Annual grassland – 231.4 ac.
Blue Oak woodland – 307.4 ac.
Cropland – 92.9 ac.
Wetlands – 3.6 ac.
Riparian – 54.8 ac.
Water – 14.7 ac.

Portions of the annual grasslands and the Blue Oak woodlands are used for cattle grazing at various times throughout year. This grazing is closely monitored to ensure that there is no damage caused to the natural environment.

All of the land at the Chico and Orland locations is developed into buildings, parking, or maintained landscape.



Buildings

Condition

The California Community College Chancellor's Office performs a building condition assessment every three years. This assessment identifies the current replacement value and the cost to perform needed repairs. From these two values, a facility condition index (FCI) is calculated by dividing the repair cost by the replacement cost. The FCI is an industry standard calculation.

The FCI is a valuable indicator of the deferred maintenance needs of a building, campus, or District. Typically, once the FCI reaches a level of .30, the users of the facility begin to notice disrepair, and untended maintenance items begin to affect other systems; i.e. a roof leak may cause damage to finishes or structure. Once the FCI reaches about .50, it becomes more cost effective to demolish and rebuild or to do a full scale remodel of the structure.

The current District-wide replacement value is $355,256,770, and the deferred maintenance costs are estimated at $49,883,078, producing an FCI of .14. In this case, the broad District-wide value is skewed due to the new buildings constructed in recent years with local bond funds. The newer buildings have FCIs at or near zero, while the older buildings have FCIs much higher. For example, the Life Science building is one of the older buildings and has an FCI of .53.

Of primary concern with respect to building condition is the ability of Facilities Planning and Management (FPM) to maintain them. The current built area of both campuses is 785,706 square feet. This is an increase of 335,350 square feet, or 74%, since 2000. During that same period, the maintenance staff has increased by 2 FTE, or 40%. The square feet per maintenance FTE has gone from 90,199 to 112,335, a 25% increase. At the same time, the buildings have become more complex, requiring a higher level of training and knowledge from the maintenance staff. As square footage increases and buildings become more complex, special attention should be given to ensure facilities can be maintained at an acceptable level.

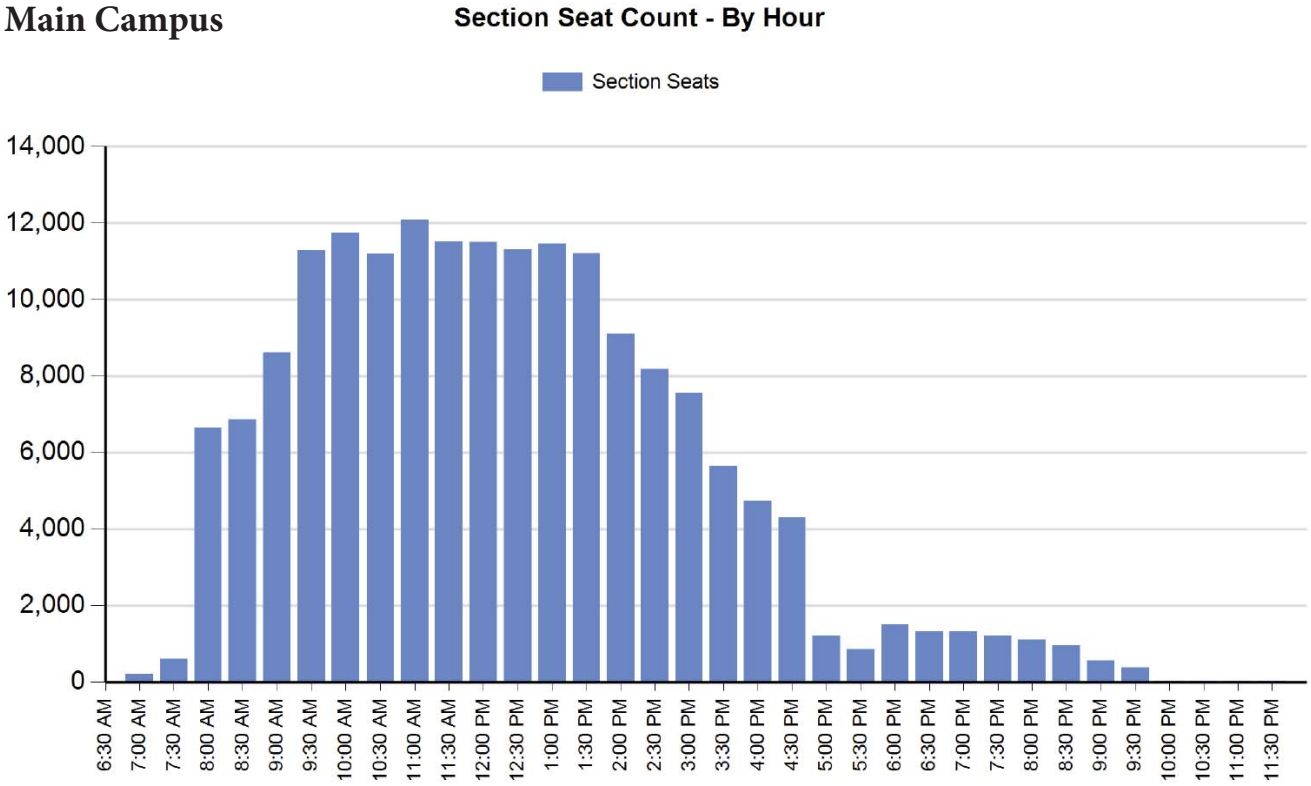
Utilization

One metric for measuring space utilization looks at classroom scheduling and serves as an indicator of the intensity of utilization. Because of variances in reporting, the data is not precise but can give broad indications of the space utilization.

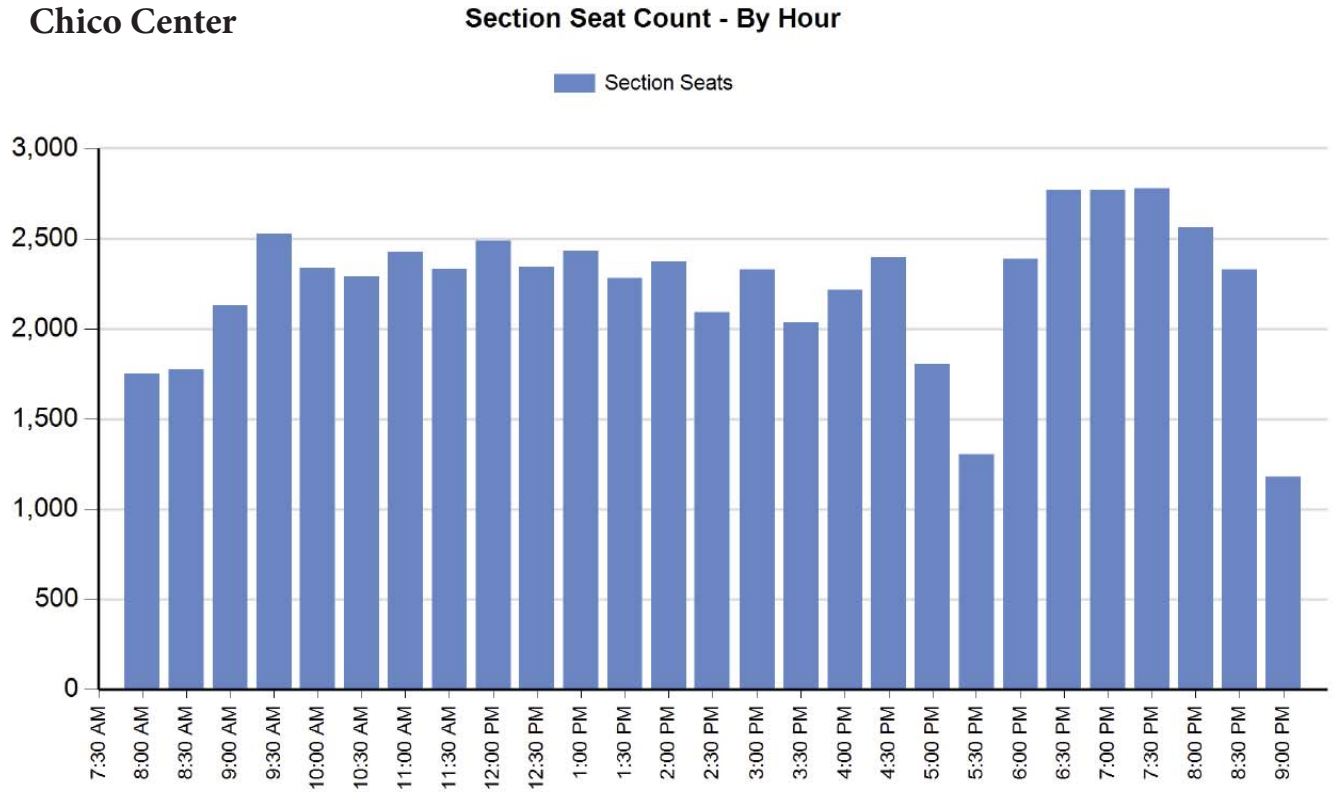
Classroom use at Butte College has been examined using two methods – the number of hours scheduled compared to the possible hours and, when the room is scheduled, how many students are using the room compared to room capacity. For the spring 2014 semester, the main campus classrooms were used approximately 38% of the available time, and when they are used, the average loading is 83% of the room capacity. These numbers indicate that there is significant availability of classrooms; however, when used, the rooms are used efficiently. The Chico Center has a much higher utilization rate of 66% and the average room loading is 80%.

The following graphs show the time-of-day classroom utilization on the main campus and the Chico Center during the 2014 spring semester.

Main Campus



Chico Center



Athletic Facilities

The Athletic facilities are in varying conditions.

- The turf grass playing fields and practice fields are in good condition due to a recent field enhancement program.
- The tennis courts are unusable due to the condition of the playing surface.
- The track and field facilities are in poor condition. The running track is still being used for general exercise, although it is in poor condition.
- The softball field recently received new dugouts and is slated to receive some additional work to the backstop.

Running track

New softball dugout

Tennis courts

- The baseball field is in good overall condition but needs some drainage issues addressed, as well as repairs to the press box and visitor dugout.
- The gymnasium is in good condition, needing only some cosmetic attention. The playing surface recently received new graphics and coatings.
- The football press box is in poor condition and needs to be either replaced or renovated.
- The locker rooms are in average condition and need attention as maintenance funding is available.

Landscape/Grounds

On the main campus approximately 70 acres are maintained as lawn, play fields, plant beds, and other types of landscaping. The breakdown is:

- Lawn – 9 acres
- Play fields – 35 acres
- Planting beds – 14 acres
- Other – 12 acres

Campus Center lawn

This landscaped area is maintained by six groundskeepers.

The control system for the irrigation of the landscaped area has recently been upgraded to provide higher efficiency of water use. Although there are no meters to measure the water used, it is estimated that approximately 55 million gallons per year go to this purpose.

The Chico Center and the Skyway Center have a combined landscape area of 2 acres and use approximately 3.2 million gallons of irrigation water annually. The same groundskeepers maintain these areas as well.

Utility Infrastructure

The Butte College facilities in the city of Chico are served by the publicly available utility services. However, on the main campus, the District is responsible for much of the utility infrastructure.

Section of gas pipe recently replaced

Natural Gas

The main campus receives natural gas through high pressure natural gas pipes that belong to PG&E. The campus has one meter and a pressure reducing valve. All of the distribution piping belongs to, and is maintained by, the District.

The natural gas distribution system was installed when the campus was originally built in the early 1970s. It is primarily constructed of PVC piping, with some unprotected black iron pipe mixed in. The PVC portions are still in serviceable condition but present potential hazards in the event of an earthquake or an accidental disruption from digging activities. This type of piping would no longer be allowed by the building code. The black iron pipes have rusted over the years and occasionally begin leaking, creating both a cost and a potential danger.

Domestic Water

Domestic water is provided to the main campus from three wells located on the property. Water is pumped into a holding tank that is elevated above all the use points, providing gravity feed. This water supply is treated and tested continually.

The domestic water system provides water for the buildings, fire suppression, irrigation (landscape and agriculture), and training activities at the Fire Academy. Currently, approximately 80 million gallons are used annually.

The wells, pumps, and holding tank are currently in serviceable condition. The distribution piping has not received attention and has occasional failures.

The aquifer that feeds the wells has been stable over the life of the campus but in recent, dry years has begun to lower somewhat. There is not yet cause for concern, but if the campus experiences continuous drought conditions, the water levels may become a significant factor.

Sewer treatment plant

Sewer Treatment

The District is responsible for the treatment of all sewage at the main campus. The treatment plant constructed at the time of the original campus construction is still operating. The capacity is adequate for the typical population of the campus. However, the equipment is reaching the end of its useful life. Recent allocations of Scheduled Maintenance funds will help extend the life of this facility.

The sewer piping infrastructure also was installed during the original construction of the campus and is showing signs of deterioration. There is currently not a need for wholesale replacement of this system. Sections are addressed as they fail, causing short-term use interruptions.

Electricity

Both the main campus and the Chico buildings are served by PG&E. Both locations also have photo-voltaic (PV) solar arrays installed that produce most of the electricity used by the District.

All of the PV arrays and supporting equipment are the property and responsibility of the District. The first phase of PV installed in 2005 is showing deterioration of the inverter and transformer equipment. Replacement of this equipment will need to happen in the next few years. Subsequent phases also will need maintenance in the coming years as they reach the life expectancy of the equipment.

Solar panel array

While PG&E owns the primary transformers, everything downstream belongs to and is maintained by the District. This includes step-down transformers, switch gear, and all the overload and short circuit protection. Most of this equipment was installed during the original construction of the campus and has reached the end of its expected life. Many of the transformers have been replaced recently. Scheduled Maintenance funds have been allocated to continue this maintenance in the coming year, and plans are in place to continue this maintenance in subsequent years.

Pedestrian Circulation

A defining characteristic of a traditional college campus is a pedestrian-friendly environment that allows human activities without fear of interaction with vehicles. The main campus of Butte College is situated in a peaceful and beautiful setting, further enhancing that experience.

In recent years the pedestrian nature of the inner campus has been enhanced through the creation of additional sidewalks, implementation of vehicle prohibition procedures, and through the installation of bollards limiting vehicle access. Service vehicles must have special permission to enter the inner campus during normal hours of operation.

Small carts are still permitted on the walkways, allowing access for deliveries and providing important transportation for disabled students.

Vehicle Circulation

In Chico, the Chico Center has convenient access to city streets, with a traffic signal to aid drivers. The parking is adequate for the current building occupancy load. The Skyway Center also has convenient access to the city streets. Parking is limited at the Skyway Center, although it seems to be adequate for the current occupancy load. Any future development in this building must consider the impact of parking on the program. The Glenn Center has adequate parking provided by the property owner.

The main campus has good access to the county roads and has adequate internal vehicle roadways for the current population. There is excess parking capacity except during the first week of each semester when many students are vying for the available seats in the classes they desire. The current system of classroom space allocation results in overcrowding of the parking facilities for that short period of time. To provide more parking, vehicles are allowed to park along Campus Drive during the first week of each semester. This is a safety concern because there are not adequate sidewalks for the pedestrians once they are parked. This also causes damage to the shoulders of the road, irrigation systems and sometimes vehicles. The District should investigate alternative means of classroom space allocation to address this problem.

The streets and parking lots vary in condition. An ongoing program of pavement maintenance is needed to minimize the total cost of ownership of the paved areas.

Efforts to reduce the greenhouse gas emissions of the District that focus on increasing carpooling and bus ridership should reduce the overall need for parking spaces on the campuses.

Recommendations

By definition, a master plan is a forward-looking document that provides a vision for future development, renewal and, in some cases, demolition of unneeded space.

Educational Master Plan Recommendations

There are three items specifically mentioned in the Educational Master Plan that pertain to the District's buildings:

1. Renovating the Technology building as defined in the Technology Building Final Project Proposal (FPP)
2. Constructing additional space for the Physical Science and Life Science programs as defined in the Science Building FPP
3. Constructing a new Welding facility

More general direction from the Educational Master Plan includes:

- Renovating the athletic facilities based on a needs assessment
- Providing permanent space for programs and services that are currently in portable facilities
- Completing land use projects to maintain compliance with regulatory requirements and meet program needs such as those in agriculture
- Developing a concept for use of the remaining undeveloped space in the Skyway Center

Other Recommendations

In addition to the items above that were mentioned in the Educational Master Plan, the following items should be considered for future action:

- Renovating other original buildings that are over 40 years old
- Health and safety related projects that include renewing the utility infrastructure, upgrading security equipment, paving maintenance and repairs to pedestrian amenities such as sidewalks and exterior lighting

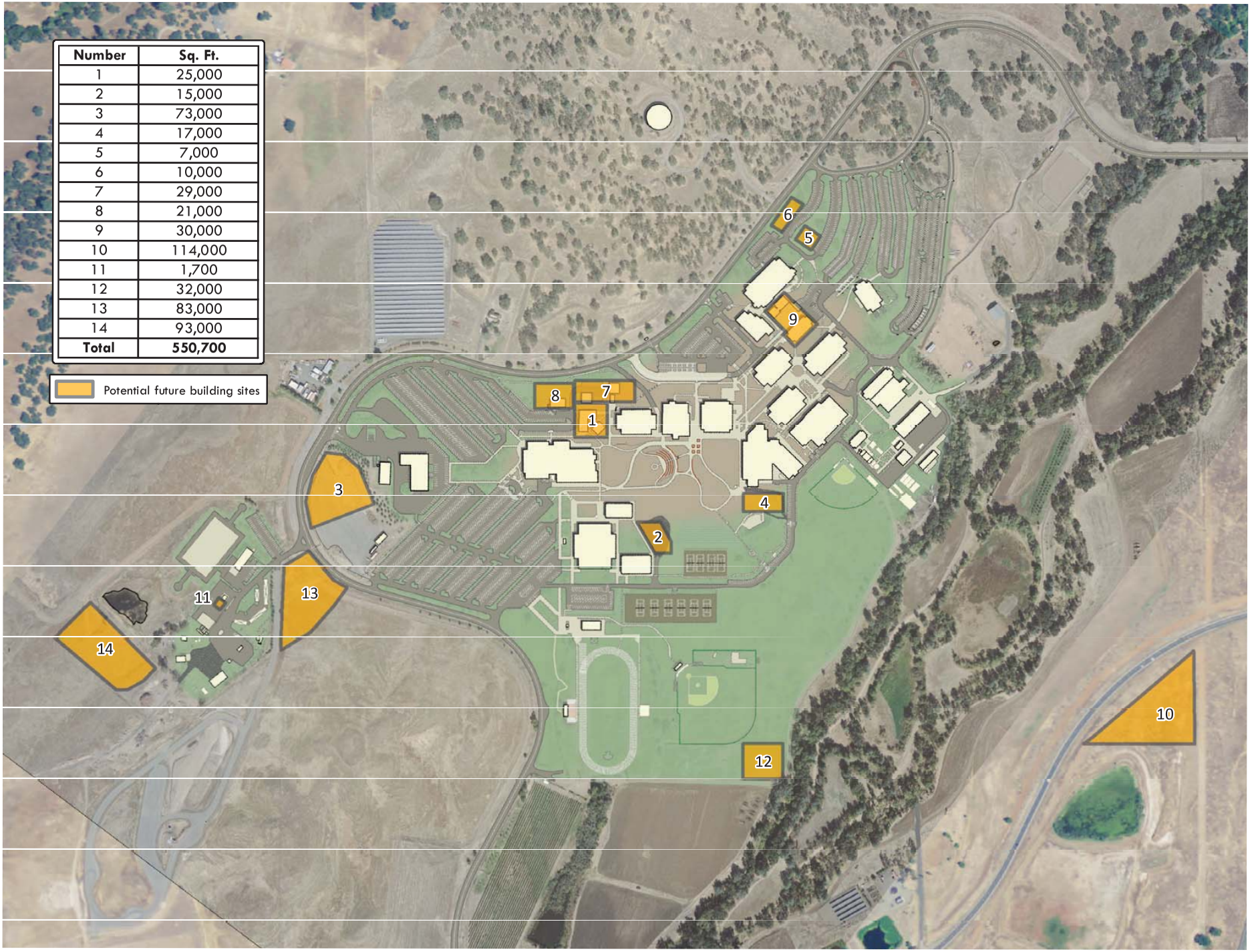
Potential Building Sites

On the following page is a map showing fourteen potential building sites on the main campus. There are no current plans for construction on any of these sites except #9, which has been identified as the preferred site for the new Science building, if it should receive funding.

No plans have yet been developed, but site #3 is the preferred site at this time for a new Welding building.

All of the other sites have varying advantages and disadvantages for potential uses.

Not shown on the map but available for consideration are approximately 25 acres along Durham-Pentz Road. The County of Butte currently has a land lease on a small parcel of this land at the intersection of Durham-Pentz and Williams roads for the possible construction of a new fire station. This parcel is currently being used as a hay field.


Number | Sq. Ft.
1 | 25,000
2 | 15,000
3 | 73,000
4 | 17,000
5 | 7,000
6 | 10,000
7 | 29,000
8 | 21,000
9 | 30,000
10 | 114,000
11 | 1,700
12 | 32,000
13 | 83,000
14 | 93,000
Total | 550,700
Potential future building sites
1
2
3
4
5
6
7
8
9
10
11
12
13
14

Individual Project Descriptions

Technology Building

The Technology building is one of the original buildings from the move to the current location. It was built in 1974 for use in teaching the technology of the day. Over the intervening years, the building has been reconfigured several times as the instructional needs changed. It is currently used to house the Mathematics program. It is not particularly well configured for that use, and many of its systems are reaching the end of their useful lives. The project to gut and remodel this building was developed several years ago and has been submitted to the California Community College Chancellor's Office for state funding.

Technology building

Science Building

The Physical Sciences, Biology, and part of the Agriculture programs are currently located in the Physical Science building and the Life Science building. These two buildings were built in the early 1970s during the move to the current location. Each building needs upgrading to meet current standards and codes and to extend their useful lives. Therefore, a project has been developed to build a new Science building for these programs. The existing buildings could be repurposed for other programs such as Agriculture.

The new Science building would add approximately 34,338 square feet of space and provide classrooms, laboratories, and support space for the Physical Science and Life Science departments.

Science class

Interim approaches to filling this need are being discussed for a couple of reasons. First, it is unlikely that state funding will be forthcoming in the foreseeable future because of the capacity/load ratios of the District. The construction of a new building would require financing through a local bond. Second, if a new building is built, adding significant square footage to the District's inventory, funding needed to operate and maintain the building would be a concern.

One interim approach under consideration at the present time is to completely renovate the current buildings and pick up additional space through a repurposing of the former Auto Technology building and/or the Welding building when and if that program is relocated to a new building.

Another interim approach under discussion is to add a small structure to house two large classrooms to support the science programs. These discussions of alternate approaches are ongoing.

Welding building

Welding Building

The current Welding building is also one of the original buildings on the main campus. It has one of the highest facility condition indexes (FCI) on campus at over .70. Typically, when a building has an FCI in excess of .50, it is more cost effective to replace the building than it is to repair it.

The Welding program also is limited by facility constraints and, because there is high demand for this program, it could expand if more space were available. The current space has a very high utilization rate and cannot accommodate additional students.

A study of the possibilities for renovating, expanding, or relocating this program was accomplished in 2014. The recommendations of that study are that it will best serve the District and the students to construct a new facility at a different location on the main campus. It is recommended that this new facility be approximately double the size of the current facility to allow for an increase in the student population of this program. This project would include appropriate landscape screening.

Athletic Facilities

As mentioned earlier in this report, the Athletic facilities have varying degrees of need. A master plan has been prepared for the Athletic facilities upgrade and renovation. Although it is several years old, that plan is still viable for general direction of the improvements to this area.

This plan includes:

- Football field renovation
- Track replacement
- Football press box replacement
- Field house replacement
- Lighting for football, baseball, softball, and soccer fields
- Soccer stadium
- Practice field upgrades
- Tennis court renovation and/or removal
- Gymnasium upgrades
- Locker room upgrades

Below is an artist's rendering of the football field and running track from the master plan.

Programs in Portable Facilities

There are several portable buildings still in use on the main campus, many of which house the programs that are part of the Student Services area. One thought is that a Student Services building could be built to replace these portable buildings. It is recommended that a study be performed to determine the most effective way to approach this task, evaluate available sites, and prepare costs for this building.

Alternatively, these programs could be relocated into available space in existing buildings.

Portable building

Concept for Skyway Center

The Skyway Center was partially renovated, with occupancy in 2012. Approximately 6,100 square feet was not finished. The original plan was to generate revenue by leasing this space for retail usage. It is now felt that this may not be the highest priority or the best use of that space. It is recommended that over the next year a plan be formulated for the use of this space that will best benefit the District.

Land Use Projects

There are two projects that fall into this category. They will both accomplish compliance with environmental regulations while maintaining or enhancing the Agriculture operations.


BWELL Bio-swale

The Agriculture Yard project will reconfigure the currently unusable area on the east side of campus for use by the Mechanized Agriculture classes. It will also complete phase II of the Bio-filtration Wetland Environmental Learning Laboratory (BWELL) project, which was started in 2011. Phase I installed the upper portion of the bio-swale along the east side of Parking Lot 4. This project will install the lower portion of that bio-swale and complete the filtration of the storm water that runs off the parking and drive areas. This project has received the needed permits but has not been funded.

The Creek Crossing project will replace the heavily degraded crossings to the three branches of Clear Creek that cross the main campus. These new crossing facilities will ensure that movement across the creek branches will not contribute any environmental pollution to the waters. This project does not have the needed permits in place.

Renovation of Other Original Buildings

The major buildings that were constructed when the main campus was established in the early 1970s are well-built and have served their purposes for over 40 years. However, they are reaching the end of their intended life spans and need to be renewed to continue to serve the needs of the District.

The Technology building has already been evaluated and a plan for renovation has been prepared.

An earlier recommendation suggests that the Life Science and Physical Science buildings should have a similar evaluation and plans for renovation.

If the alternate plan for the science programs is adopted, it may include renovation of the former Auto Technology and Welding buildings. If that plan is not adopted, these buildings should be studied for other uses. A study would show whether it is advisable to use the remaining structures or if it would be better to demolish them.

The remaining building is Business Education. It is approximately the same age, has undergone some reconfiguration over its lifetime, and will need to be renewed to continue providing service to the District.

Utility Infrastructure

The majority of the utility infrastructure was installed at the time the main campus was built in the early 1970s. The exception is the photo-voltaic electricity production equipment, which was installed more recently.

For all the utility infrastructure components, it is recommended that a repair and replacement fund be established to provide the needed maintenance. These systems eliminate the need to pay monthly utility bills, but they only sporadically receive funds for repair or replacement. Systematic attention to maintenance can be more cost-effective than responding to emergencies when components fail.

Original electrical panel

Phase I solar inverters

Electricity

The high voltage distribution and primary transformers are the property of PG&E and are maintained by them. All of the switchgear, panels, and lower voltage transformers are the responsibility of the District, and most are reaching the end of their useful lives. If the State continues to provide Scheduled Maintenance funding in coming years, this equipment can be systematically replaced. If that funding stream does not continue, there will be a critical need to replace this equipment with other funds.

The photo-voltaic system is much newer but is already

showing signs of deterioration. The first system, installed in 2005, at times has not produced energy because of component failure, primarily the inverters and transformers. These devices suffer from the high heat levels that are produced by their functions and by the ambient temperatures of our campus. It is critical to keep these systems functional because of the high cost of energy when purchased.

Domestic Water

The domestic water system is entirely the responsibility of the District. The main distribution piping suffers occasional failure, which causes the need for emergency response and inconvenience to the campus users. Many of the main valves are no longer functioning, which causes large areas of the campus to be without water service whenever it is necessary to shut down an area. There are plans in place to replace some of these valves with the current year Scheduled Maintenance funding. Again, if this funding continues, more replacements can be installed. If not, other funding will be needed.

Sewer Systems

The major components of the sanitary sewer system are the collection piping and the treatment plant. The treatment plant relies heavily on a series of pumps and aerators. One of the large air pumps was replaced in 2013, and several other pieces of equipment are scheduled for replacement in 2015 with Scheduled Maintenance funding. This should allow the treatment plant to function adequately for several years.

The collection piping is original to the campus and occasionally fails, usually due to root invasion. In 2014 a major cleaning of the system was performed. That should keep the system operating adequately for a few years. However, because of the age of the system, it will continue to fail occasionally, and funding needs to be available to respond to these instances.

The storm sewer is a system of collection pipes that are in similar condition to the sanitary sewer system. They were also cleaned in 2014 and should provide service for the next few years.

Three styles of walkway lighting on the main campus

Pedestrian Circulation

Pedestrian circulation is very important to the overall ambiance of a campus. The current system of sidewalks is adequate and in average condition. Ongoing maintenance will be required for the walking surfaces. There are some areas that need additional restrictions to vehicular traffic.

Over time, and with the addition of new buildings and the removal of others, the sidewalk system has developed characteristics that are incompatible with the requirements of ADA. A full assessment needs to be done, and deficient areas addressed.

Another aspect of pedestrian circulation is adequate lighting for use during the night hours. Many of the existing walkway lighting fixtures are original to the construction of the campus. They are reaching the end of their useful lives and need to be replaced.

Signage for wayfinding is also an important concern. The large amount of construction over the past 14 years has caused many of the older signs to become obsolete. It is recommended that a study of the signage be performed and proposals be brought forward for standardization for future signing projects.

Vehicle Circulation

The infrastructure for vehicle circulation consists primarily of the streets, roads, and parking lots.

With the help of the California Pavement Preservation Center, located at California State University, Chico, an assessment of the District's paved surfaces was recently completed, and recommendations were provided for maintenance strategies. This will provide the basis for developing a long-term pavement maintenance plan. This plan will need to be funded. There is currently no ongoing source of funds for this effort.

The capacity of the parking lots on the main campus is sufficient except during the first few days of each semester. This added pressure is due to the requirement that students who wish to add a class to their schedule must attend the first day of classes. During those times, parking is allowed along Campus Drive. This parking is of concern for a couple of reasons. First, there are safety concerns because there are not sidewalks and crosswalks in all of these areas, often placing the pedestrians at risk. Second, depending on the weather at the time, parking along the road causes damage to shoulders, creating more costs to maintain those areas.

A potential reduction to the overall capacity of parking on the main campus could result from the construction of a new Welding facility. One of the suggested locations for this new structure is in the area now used as an overflow parking lot. The building would not occupy the total area, but would reduce the overall number of parking spaces on campus.

Landscape

The landscaped areas of the Chico campuses were designed with sustainable principles in mind.

The main campus has large areas of turf grass that require large amounts of water to keep looking good. There are also several trees on campus that are more appropriate for a wetter climate.

Several areas of turf grass have been proposed for replacement with native grasses that are low water users. Already in progress is the area south of the Physical Science building. Other areas will be transformed as funding allows.

Native grass at the Physical Science lawn

As trees reach the end of their lives naturally, they are being replaced with varieties more tolerant of our climate, with lower water usage needs.

Along with the strategy of replacing plant material with more tolerant varieties, the irrigation system is undergoing upgrades that will use water more efficiently. This process is well underway but will need ongoing support.

The landscape is an important aspect of the campus beauty and ambiance. As projects are planned and designed, the landscape and visual impact will be given a high priority. For example, if the new Welding building is constructed, part of that project would be to install appropriate fencing, berms, or other landscape elements to preserve the beauty of the campus.

Land Use

Although two projects – Ag Yard and Creek Crossings – have already been discussed, there are other aspects of land use planning that deserve attention.

Preservation of Riparian Area

The main campus is fortunate to be home to a section of Clear Creek. This riparian area provides many opportunities for the education of students without the bother and cost of travel. However, it is a fragile environment and requires diligence to prevent degradation. Both of the land use projects mentioned above are in support of protecting this area. The Agriculture department is employing a small herd of goats to assist with controlling invasive plant species in this area.

Preservation of Ecological and Cultural Assets

The main campus is also home to rare or endangered species of both plants and animals, and is the site of historical artifacts. All require protection by District staff.

Interpretive signage along Clear Creek trail

Clear Creek near Boyer's Glen

Security

The Butte College main campus has two entrances available to the public. Currently there are no cameras at these entrances. Visible cameras placed at these entrances would act to discourage criminals from targeting our staff and students. Cameras at these locations would assist the police department in investigation of incidents on the main campus. The police department would be able to gather license plate information and vehicle description information as needed in response to an incident. Th e department would not store or place this information into a database unless an incident requiring investigation occurs.

Butte College currently has closed circuit surveillance cameras in the following locations: Student and Administrative Services, Campus Center, Arts, Library, Sewer Treatment, Solar, Chico Center (2 DVRs), Skyway Center, and Glenn County Center. These were installed at different times and by a couple of companies. Each system uses a stand-alone DVR and is accessible by remote. Some are accessible on mobile devices, some are not. Some of the older DVRs are difficult to access or have limited storage space available. The DVRs need to be upgraded to modern standards and standardized so they will all work together and are accessible over multiple platforms for quick coordination and response to emergencies or investigation of incidents.

A full assessment of security issues at all the campuses needs to be performed and any deficiencies should be addressed.

Funding Sources

Funding for any capital improvements may come in several forms, but typically come from two primary sources: statewide education construction bonds, administered by the California Community College Chancellor's Office (CCCCO), or a local bond. Other potential but unlikely funding sources include: District reserves and Public/ Private Partnerships. At the present time, these last two are not being considered.

Statewide Construction Bond

A statewide education construction bond was not on the November 2014 ballot. For the District to be eligible for statewide bond funds, it must meet the criteria established by the CCCCO. The primary impediment to receiving any of those funds is the amount of space the District already has, compared to the amount the CCCCO calculates it needs, based on the student enrollment. This is called the capacity/load ratio, and compares the currently available space (capacity) to the current need for space (load). There are several categories for ratios. For each category, a ratio of 100% means that the District has the right amount of capacity for the load, while higher ratios indicate an overbuilt condition. Low ratios indicate a need for more space and are required to receive funding. Shown below are the District's capacity/load ratios, based on current and projected enrollment produced by the CCCCO.

Fiscal Year	Lecture	Lab.	Office	Library	AV/TV
2014-2015	122%	115%	131%	108%	6%
2015-2016	141%	118%	125%	116%	4%
2016-2017	138%	115%	123%	114%	4%
2017-2018	135%	112%	123%	112%	4%
2018-2019	128%	111%	123%	114%	4%
2019-2020	129%	116%	123%	113%	4%

Without the reduction of space utilized or a drastic increase in enrollment, it is unlikely that the District will receive any funding through the CCCCO should a state bond pass in future years.

Space Utilization

Because of the close connection between space utilization and state funding, the manner with which the available building space on campus is used is vitally important. Each square foot has an associated cost of ownership. The least expensive building is the one that is not built, and efficiently using our existing buildings before constructing new buildings is an important consideration.

The California Community College Chancellor's Office requires that the District maintain an accurate database of the building spaces on our campuses and how each is used. This is a valuable resource when evaluating space utilization.

Occasionally, there is a desire to change the utilization of a particular space. When this happens, the matter is taken to the President's Leadership Team for a determination. Consideration is given to the District's Mission, the Educational Master Plan, and the Strategic Initiatives when deciding the future use of space.

Local Bond

A local bond is a more likely opportunity to secure capital improvement funding. The voters in Butte and Glenn counties have historically been supportive of education in general and of Butte College in particular. The next prime opportunity for a local bond vote will occur in 2016.

Project Costs

The costs associated with the various capital projects are, of necessity, estimates only. However some estimates have received more input than others.

There are three levels of estimates used in this document:

Preliminary: These estimates are more guesses than true estimates. No design work has been done and therefore no quantities (square feet, linear feet, etc.) can be used to derive a cost. This will typically be the result of a brief thought process that makes a guess at the scope of the project and a guess at the unit cost of similar projects to produce an order-of-magnitude estimate.

Schematic: At this level, basic design work has been done. The program users of the space have been queried, square footage needs have been defined and industry standard cost factors have been applied. To proceed to this level requires professional design effort and therefore has associated costs. Within the California Community College Chancellor's Office (CCCCO) capital outlay system, this level is roughly equivalent to an Initial Project Proposal (IPP), however the CCCCO requires additional information for the IPP such as the project's relationship to the district's master plan and five-year plan, California Environmental Quality Act (CEQA) status, and capacity justifications.

Design Development: This level contains a more precise definition of the scope of the project. The site has been selected, some of the materials have been selected, and in general the design work is a bit more complete. This is not to the level of construction documents. This level roughly corresponds to the CCCCO's Final Project Proposal (FPP). Again there are additional requirements from the CCCCO. To be included are an analysis of the building space use and weekly student contact hours (WSCH), a more detailed cost estimate with detailed breakdown of the costs, a project schedule, an estimate of the furniture, fixtures and equipment, and an analysis of the future costs of ownership, among other detail items.

The design costs associated with the IPP and FPP levels of design and estimating are typically in the $30-50K range for each level, depending on the size of the project. Final construction documents are over and above these costs. As noted above, the preliminary estimates are primarily educated guesses generated by district staff.

The following table lists the various projects in this plan, the level of design/estimating effort already accomplished, an indication of estimating yet needed and the associated costs, and the current estimated project cost.

The purpose of the Facilities Plan document is to project the buildings and grounds needs into the future in support of the institution's Educational Master Plan and to provide direction to ensure that the District has the facilities necessary to be able to accomplish the goals of that plan. The projects below are in support of those goals.

Project	Estimating level*	Estimating funds needed ($K)	Current estimate ($M)
Construction/Renovation Projects			
Science building replacement (page 16)	FPP		32.4
Technology building renovation (page 16)	FPP		6.8
Welding building replacement (page 17)	IPP	40	23
Athletic facility upgrade (page 17)	Preliminary	80	12
Permanent space to displace portables (page 18)	Preliminary	80	7
Original building renovations (page 19)	Preliminary	120	18
Skyway Center build out (page 18)	Preliminary	80	3
Subtotal		**400**	**102.2**
Health & Safety Projects			
Security upgrades (page 22)	Schematic	0.5	0.1
Utility infrastructure (page 19)	Preliminary	120	11
Paving and parking renewal (page 21)	Preliminary	40	5
Walkways/exterior lighting/signage (page 20)	Preliminary	75	1
Subtotal		**235.5**	**17.1**
Land Use Projects			
Ag Yard and Creek Crossings (page 18)	Design Dev		0.6
Landscape upgrades (page 21)	Preliminary	20	1
Subtotal		**20**	**1.6**
Total		**655.5**	**120.9**

*FPP and IPP indicate project submitted to CCCCO

Butte College Facilities Planning and Management
2015